



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/737,134	12/16/2003	Richard Sale	CUNO-407.2	6027

45017 7590 07/15/2005

CUNO INCORPORATED
400 RESEARCH PARKWAY
P. O. BOX 1018
MERIDEN, CT 06450-1018

EXAMINER

FORTUNA, ANA M

ART UNIT	PAPER NUMBER
----------	--------------

1723

DATE MAILED: 07/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/737,134

Applicant(s)

SALE ET AL.

Examiner

Ana M. Fortuna

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 29-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 29-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Art Unit: 1723

DETAILED ACTION

Double Patenting

1. Claims 29-42 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15 of copending Application No. 10/771,801. Although the conflicting claims are not identical, they are not patentably distinct from each other because the multizone membrane is claimed as a multilayer membrane including all the limitations of the present claims in the copending application, the polymer material and membrane configuration is also claimed.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 29-42 are rejected under 35 U.S.C. 102(e) as being anticipated by Kools (2003/0209485(application publication corresponding to serial No.10/275,210, which claims priority over PCT/US01/16817, with priority on 60/206,623, filed on 5/24/2000)).

Art Unit: 1723

Kools discloses a multiplayer membrane and the process of making the membranes by co-casting, forming a continuous layers (page 15, lines 11-21, page 7, sections 0035-section 0037). The membrane is also defined in the published application as unsupported, and with no demarcation line between layers (sections 0046-0047). The membrane layers are disclosed as being asymmetrical and symmetrical (page 10, section 0053, lines 3-14, Fig. 16).

As to claim 30 producing the membrane from two distinct polymer dopes is also disclosed in the publication (page 10, section 0052 (second paragraph)).

As to claims 31-33, the polymer materials are also disclosed (page 9, section 0049).

Regarding claims 34, 36, the type I, type III (as defined having the larger pore size as upstream), is disclosed by the publication (section 0053, last five lines).

As to claim 35, e. g. symmetrical membrane (section 0053).

As to claims 37-4, forming multilayers with the layer of smaller pore size being within the depth of the cross section of the membrane structure is suggested in the publication (section 0053, and 0055). Combinations of distinct or same pore layers and polymers composition are disclosed in the prior discussed sections.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

Art Unit: 1723

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 29, 33, 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Greenwood et al (6,056,903)(hereinafter US Patent '903). Patent '903 discloses a microporous symmetrical polysulfone membrane (abstract, and brief summary of the invention, column 2, lines 25-48). The term multizone is not disclosed, since the membrane is formed in one zone, however, the configuration of claim 35 correspond to two zones of the same pore size continuously forming a single zone. The membrane after formed do not include a support, e.g. made by phase inversion. Independently of the process, it would have been obvious to one skilled in the art at the invention was made to consider the membrane of '903 and multizone membrane with continuous zones of the same porosity.

Conclusion

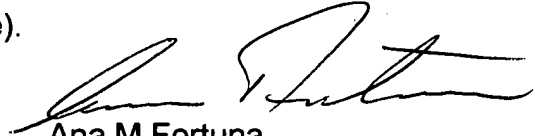
5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Additional reference cited disclose non-supported multiplayer membranes of the art and processes of making the membrane, including co-casting on a support.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ana M Fortuna whose telephone number is (571) 272-1141. The examiner can normally be reached on 9:30-6:00 M-F.

Art Unit: 1723

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on (571) 272-1151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ana M Fortuna
Primary Examiner
Art Unit 1723

AF
July, 12, 2005